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09/809,201	03/16/2001	Kenneth C.R.C. Arnold	6502.0115-01	5028

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EXAMINER
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ALI, SYED J

ART UNIT	PAPER NUMBER
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2195

DATE MAILED: 03/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/809,201

Applicant(s)

ARNOLD ET AL.

Examiner

Syed J. Ali

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 3-52 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 3-52 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>Dec. 22, 2005</u> . | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. This office action is in response to the amendment filed December 1, 2005.

Claims 3-52 are presented for examination.

2. The text of those sections of Title 35, U.S. code not included in this office action can be found in a prior office action.

### ***Specification***

3. The cross reference related to the application cited in the specification must be updated (i.e. update the relevant status, with PTO serial numbers or patent numbers where appropriate, on page 7, lines 2-8). The entire specification should be so revised.

4. The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code. See page 7 lines 8-11. Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01.

### ***Claim Rejections - 35 USC § 102***

5. **Claims 3-52 are rejected under 35 U.S.C. 102(e) as being anticipated by Whitehead et al. (USPN 6,085,030) (hereinafter Whitehead).**

6. As per claim 3, Whitehead teaches the invention as claimed, including a method performed on a processor operatively coupled to a collection of servers which enables a

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client associated with the processor to dynamically distribute a task to a server, the method comprising the steps of:

selecting a server to process the task (col. 1 lines 36-38; col. 2 lines 1-9; col. 7 lines 25-33);

forming a task request from parameters and data (col. 8 lines 19-27, 32-41);

sending the task request to the selected server (col. 6 lines 60-64; col. 8 lines 32-41), which downloads any needed executable byte code (col. 9 lines 28-36, 42-46), invokes a generic compute technique capable of executing the task request on the selected server and generates results (col. 10 lines 52-58; col. 11 line 65 - col. 12 line 3); and

receiving the results back from the selected server (col. 11 line 58 - col. 12 line 3).

7. As per claim 4, Whitehead teaches the invention as claimed, including the method of claim 3, wherein the processor is operatively coupled to a computer system having a primary storage device, a secondary storage device, a display device, and an input/output mechanism (col. 6 lines 26-32).

8. As per claim 5, Whitehead teaches the invention as claimed, including the method of claim 3, wherein the task is developed in a programming language and environment compatible with each of the server computers (col. 7 lines 7-16; col. 8 lines 55-61).

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9. As per claim 6, Whitehead teaches the invention as claimed, including the method of claim 3, wherein the server is selected from a plurality of heterogeneous computer systems (col. 1 lines 31-35; col. 4 lines 36-45).

10. As per claim 7, Whitehead teaches the invention as claimed, including the method of claim 5, wherein the environment includes a remote procedure call subsystem (col. 2 lines 6-9; col. 7 lines 25-29).

11. As per claim 8, Whitehead teaches the invention as claimed, including the method of claim 7, wherein the remote procedure call subsystem is the Remote Method Invocation [RMI] system (col. 2 lines 39-42; col. 7 lines 25-29).

12. As per claim 9, Whitehead teaches the invention as claimed, including the method of claim 3, wherein selecting the server comprises selecting the server based on the overall processing load distribution among the collection of servers (col. 12 lines 17-22).

13. As per claim 10, Whitehead teaches the invention as claimed, including the method of claim 6, wherein the selected server has the lowest load characteristic compared with average load characteristic of the servers over a predetermined time period (col. 12 lines 17-22).

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14. As per claim 11, Whitehead teaches the invention as claimed, including the method of claim 3, wherein selecting the server comprises selecting the server based on the specialized computing capabilities of each server (col. 8 lines 6-11, 16-19).

15. As per claim 12, Whitehead teaches the invention as claimed, including the method of claim 11, wherein the specialized computing capabilities include a capability to render images (col. 6 lines 15-20, wherein rendering images is a well-known and inherent feature of practically any computing system).

16. As per claim 13, Whitehead teaches the invention as claimed, including the method of claim 3, wherein the sending step further comprises the substeps of:

determining if code related to the requested task is present on the selected server (col. 9 lines 28-36, 42-46)

downloading the code onto the selected server when the code is not present on the selected server (col. 9 lines 28-36, 42-46).

17. As per claim 14, Whitehead teaches the invention as claimed, including the method of claim 3, wherein the sending step further comprises:

providing the task as a parameter to the generic compute method (col. 6 lines 60-64; col. 8 lines 32-41; col. 10 lines 52-58; col. 11 line 65 - col. 12 line 3).

18. As per claim 15, Whitehead teaches the invention as claimed, including the method of claim 3 further comprising the step of indicating to the server that results from

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a computed task should be stored in a result cache on the selected server for subsequent tasks to use (col. 12 lines 4-16).

19. As per claim 16, Whitehead teaches the invention as claimed, including the method of claim 3, wherein the results are used for further processing on the client (col. 11 line 58 - col. 12 line 3).

20. As per claim 17, Whitehead teaches the invention as claimed, including the method of claim 3, wherein the results comprise an object (col. 12 lines 44-60).

21. As per claim 18, Whitehead teaches the invention as claimed, including a method performed on a processor operatively coupled to a collection of servers which enables a server associated with the processor to dynamically receive and process a task from a client computer wherein the task is in an executable programming language compatible with each of the server computers, the method comprising the steps of:

assembling parameters and data from a task request into a task (col. 8 lines 19-27, 32-41);

downloading any needed executable byte code (col. 9 lines 28-36, 42-46);

invoking a generic compute method on the server, which is capable of processing a plurality of types of tasks, which executes the task and generates results (col. 10 lines 52-58; col. 11 line 65 - col. 12 line 3); and

returning results to the client (col. 11 line 58 - col. 12 line 3).

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22. As per claim 19, Whitehead teaches the invention as claimed, including the method of claim 18, wherein the processor is operatively coupled to a computer system having a primary storage, a secondary storage device, a display device, and an input/output mechanism (col. 6 lines 26-32).

23. As per claim 20, Whitehead teaches the invention as claimed, including the method of claim 18, wherein the task is developed in a programming language compatible with each of the server computers (col. 7 lines 7-16; col. 8 lines 55-61).

24. As per claim 21, Whitehead teaches the invention as claimed, including the method of claim 18, wherein the task is developed using the Java programming language and environment (col. 9 line 32-46).

25. As per claim 22, Whitehead teaches the invention as claimed, including the method of claim 21, wherein the environment includes a remote procedure call subsystem (col. 2 lines 6-9; col. 7 lines 25-29).

26. As per claim 23, Whitehead teaches the invention as claimed, including the method of claim 22, wherein the remote procedure call subsystem is the Remote Method Invocation [RMI] system (col. 2 lines 39-42; col. 7 lines 25-29).

27. As per claim 24, Whitehead teaches the invention as claimed, including the method of claim 18, wherein the assembling step further comprises:



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determining if types related to the task are available on the server (col. 9 lines 28-36, 42-46);

when the types are not available on the server, downloading the types onto the server from a location as indicated by the parameters provided by the client (col. 9 lines 28-36, 42-46); and

executing the task based upon the data and parameters provided by the client (col. 10 lines 52-58; col. 11 line 65 - col. 12 line 3).

28. As per claim 25, Whitehead teaches the invention as claimed, including the method of claim 24, wherein the determining step and the downloading steps are performed by a remote procedure call [RPC] subsystem (col. 2 lines 6-9; col. 7 lines 25-29).

29. As per claim 26, Whitehead teaches the invention as claimed, including the method of claim 25, wherein the determining step is performed by a Remote Method Invocation [RMI] type of remote procedure call subsystem (col. 2 lines 39-42; col. 7 lines 25-29).

30. As per claim 27, Whitehead teaches the invention as claimed, including the method of claim 18, further comprising the substep of storing the results from the task in a cache if a subsequent task will use the results (col. 12 lines 4-16).

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31. As per claims 28-42, Whitehead teaches the invention as claimed, including a computer readable medium containing instructions for controlling a computer system comprising a collection of servers to perform the method of claims 3-17 (col. 6 lines 26-32).

32. As per claims 43-52, Whitehead teaches the invention as claimed, including a computer readable medium containing instructions for controlling a computer system comprising a collection of servers to perform the method of claims 18-27 (col. 6 lines 26-32).

***Response to Arguments***

33. **Applicant's arguments filed December 1, 2005 have been fully considered but they are not persuasive.**

34. Applicant alleges that Whitehead fails to teach all the features of the independent claims. In particular, Applicant alleges that Whitehead fails to teach the features of "sending the task to the selected server", which "invokes a generic compute technique."

35. In response to the alleged deficiencies of Whitehead with respect to "sending the task request to the selected server," it should be noted that Applicant's arguments identify other portions of Whitehead that were not cited as teaching this feature. Therefore, it is clear as to why Applicant has overlooked the portion of Whitehead that unambiguously teaches a client sending a task request to a server. The portion of Whitehead cited as

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teaching this feature is at col. 6 lines 60-64 and col. 8 lines 32-41 (see numbered paragraph 4 above), yet Applicant does not address this portion of Whitehead at all.

To clarify, Whitehead teaches a distributed interaction between a client and a server which responds to application requests from the client. Specifically, “a component server node... provide[s] services in response to requests from applications executing on a client” (col. 6 lines 60-64). The client may execute an application locally by requesting the components be downloaded to the local machine, or in the alternative, the application can be executed remotely on the server using remote technology such as remote procedure calls (RPCs) or remote method invocation (RMI) (col. 7 lines 25-29). This allows distributed interaction between clients and heterogeneous software components (col. 7 lines 8-11). The embodiment of Whitehead pertaining to remote execution corresponds to the claimed feature of “sending the task request to the selected server.” This is made especially clear in view of Applicant’s specification, which indicates that distributed computing is advantageous for heterogeneous computer networks that utilize remote technology such as RPC or RMI (pg. 6 line 7 - pg. 7 line 11). The similarity between the language used in the specification and Whitehead is not coincidental; Whitehead is directed to solving substantially the same problem as presented by Applicant and presents a solution that is markedly similar as well.

36. In response to the alleged deficiencies of Whitehead with respect to the limitation wherein the server “invokes a generic compute technique capable of executing the task request,” Whitehead clearly teaches this feature. The system is designed such that the software developer can write basic routines using a familiar object model, which then

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adds functionality to existing interfaces and populates information from the component registry (col. 8 line 54 - col. 9 line 1). The remote server, upon receiving a request from a client application, spawns a process and invokes a resident executable, i.e. generic compute technique, for performing the requested operation (col. 12 lines 23-29). The server then downloads any necessary components, fulfills the request, and sends the results back to the client. Whitehead even discusses performing these operations using the same technology described by Applicant, i.e. Java, RMI, JIT compilation, etc.

### *Conclusion*

37. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Syed J. Ali whose telephone number is (571) 272-3769. The examiner can normally be reached on Mon-Fri 8-5:30, 2nd Friday off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai T. An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Syed Ali  
February 28, 2006



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